

Date: Sat, 25 Sep 93 04:30:12 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #58
To: Ham-Ant

Ham-Ant Digest Sat, 25 Sep 93 Volume 93 : Issue 58

Today's Topics:

 2/70 beam project wanted
 ??Guy wires interfear with dipole?? (2 msgs)
 Coils in Cellular Antennas
 Homebrew "IsoLoop"(tm) Works great
 Kill the Rubber Duck!
 Losses in VHF/UHF connectors (summary)
 Need help with HF receiver antenna for college dorm... (4 msgs)

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>

Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Thu, 23 Sep 1993 21:52:38 GMT
From: spsgate!mogate!newsgate!nuntius@uunet.uu.net
Subject: 2/70 beam project wanted
To: ham-ant@ucsd.edu

Hi I would like some plans from someone who has built and likes their
dual band beam.....(if it is at all possible to combine them). I would
like an antenna that can be taken down and transported in a small vehicle
and set up when camping. Has anyone seen an animal like what I have
described? Thanks again for the assistance.....BTW if you have a a mono
band beam that really trips your trigger I would love to see those plans
also.

I have seen some "arrow" antennas, and since I am an archer, this seems
like a good place to start.....Thanks again

Rick Aldom
ayka60@email.sps.mot.com

Date: 23 Sep 93 13:27:56 EST
From: dale.ksc.nasa.gov!titan.ksc.nasa.gov!k4dii.ksc.nasa.gov!user@ames.arpa
Subject: ??Guy wires interfear with dipole??
To: ham-ant@ucsd.edu

In article <CDrsBn.66E@ucdavis.edu>, szhall@elroy.ucdavis.edu () wrote:
> I have just put up a tall mast with a 2 meter vertical on the top of it.
> Now I wish to add a dipole to the mast by putting out a 18" arm..My
> question is this: Will the guy wires which hold up the medel mast
> interface with the dipole?

Jeff-

Will guy wires or masts interfere with a nearby dipole? Of course they will. Does it make any difference? NOT MUCH!

To minimize the interaction between an antenna and nearby conductors, do your best to have them cross at right-angles. The greatest coupling is between two conductors traveling together in the same direction.

The most serious problem would be the result of transmitted energy being coupled into another circuit, such as the telephone cable or the feedline from the antenna feeding some other receiver (TV, FM, et cetera). You should expect some interference with these sensitive devices. However, damage might occur if too much energy was coupled.

In the "real world", you can't always make things perfect. Keeping your antenna away from other conductors may be nearly impossible in some situations. Therefore, you do the best you can, and live with the results.

If someone else in the household wants to watch TV, you may have to delay your Ham activity until their program is over.

73, Fred, K4DII

Date: 23 Sep 93 20:29:29 GMT
From: pacbell.com!sgiblab!spool.mu.edu!agate!library.ucla.edu!news.mic.ucla.edu!unixg.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!alberta!atha!aupair.cs.athabascau.ca!tech@network.ucsd.edu
Subject: ??Guy wires interfear with dipole??
To: ham-ant@ucsd.edu

To interfear...

to be frightened together
to together frighten somebody else
to frighten each other

--

Richard Loken VE6BSV : "...underneath those
Athabasca University, Athabasca, Alberta Canada : tuques we wear, our heads
tech@cs.AthabascaU.CA : are naked!"
{atha|aunro}@cs.athabascau.ca!tech : - Aurthor Black

Date: 24 Sep 93 06:20:33 GMT
From: ogicse!psgrain!ee.und.ac.za!hippo.ru.ac.za!caesar.wits.ac.za!
YingTongDiddleIPO.ee.wits.ac.za!clark@network.ucsd.edu
Subject: Coils in Cellular Antennas
To: ham-ant@ucsd.edu

In article <1993Sep22.183313.13702@Csl.Stanford.EDU> paulf@Csl.Stanford.EDU
(Paul Flaherty) writes:

>From: paulf@Csl.Stanford.EDU (Paul Flaherty)

>Subject: Re: Coils in Cellular Antennas

>Date: 22 Sep 93 18:33:13 GMT

>david@bu.edu (David Gagnon) writes:

>>I have been seeing TV and billboard adds for cellular telephones that make
>>much of the fact that there is short segment of about 5-7 helical turns in
>>the middle of what is recognized as a cellular telephone antenna.

>The antenna functions as a two element collinear array, and the coil serves
>to phase the upper element in the array.

(Being essentially a self-resonant LC network that takes ages of fiddling
until the current distribution becomes that of a collinear!! -- I know, I
designed one! -- BTW it's not in the middle either!)

>--

>--Paul Flaherty, N9FZX | "The National Anthem has become The Whine."

>->paulf@Stanford.EDU | -- Charles Sykes, _A Nation of Victims_

Date: Fri, 24 Sep 1993 14:39:24 GMT
From: beta.lanl.gov!tjf@lanl.gov

Subject: Homebrew "IsoLoop"(tm) Works great
To: ham-ant@ucsd.edu

Hi...Got a hankering to make a new antenna and was curious about the IsoLoop and it's clones going for several hundred dollars. I did a simple calculation of X_L for a one-turn loop of 36" to 48" diameter and calculated the X_C and capacitance needed to resonate on various bands. I got some 1/2 inch copper tubing, bent it into a 48" circle and mounted some 20KV doorknob capacitors and a feedline. With 60pF I get a resonance around 14.05Mhz and 25pF resonance around 21.1Mhz. Put it up in a PVC pipe frame BTW. Cost me about \$10 and I bought the PVC and tubing new from a hardware store. BTW this corresponds with X_L minus $X_C \approx 50$ ohms. With a tuner, I could probably load it up from 80m to 10m ! Try it! With my MFJ 20m QRP rig I was 599 from Florida and Washington state. Seems to work at least as well as my homebrew half-wave helical on 20m.

Tom
KJ5LT

PS...no TVI problem at QRP power ;^).

Date: 24 Sep 1993 11:33:09 -0400
From: noc.near.net!news.delphi.com!news.delphi.com!not-for-mail@uunet.uu.net
Subject: Kill the Rubber Duck!
To: ham-ant@ucsd.edu

ritterbus001@wctsub.ctstateu.edu writes:

>I have a RS HTX202, and several people have suggested that I get rid
>of the rubber duck, and get a "real" antenna. One suggested (jokingly,
>I think) that even a piece of coat hangar would be better, which brings
>me to my questions:

>1) Would any telescoping antenna, extended to feet = $468 / 144$ Mhz be an
> end-fed halfwave, and work correctly without further ado?

A friend uses a commercially available 5/8-wave telescoping antenna on his HT and it works very well. It also has a spring at the base for added flexibility and longevity. :-) The bad news is that it's a pain to use indoors -- duck when you are in the proximity of ceiling fans! :-)

>2) Would the same antenna, shortened to feet = $234 / 144$ Mhz work
as > a quarterwave? Is a groundplane required? What is a good idea
> for a groundplane for 2m?

I use a Radio Shack 5/8-wave mag-mount antenna with my HTX-202 and it

works very well. It's mounted on the mantle with a metal plate for the ground plane and I use a small BNC to SO-239 convertor, readily available at Radio Shack and other electronic stores.

While on the topic of antennas and connectors, I have a couple of questions. Has anyone used Motorola jacks with 2m transceivers and do they work well? The reason I ask is that I'm using the HT as a mobile, a base, and a portable radio and it's a pain disconnecting and reconnecting antenna cables -- not to mention the wear and tear on the BNC connector. I've been considering using a BNC to Motorola plug on the HT and putting SO-239 to Motorola jacks on the 5/8-wave antennas, and a BNC to Motorola jack on the rubber duck. (Assuming, of course, that I can find the connectors -- Radio advertises them in the catalog but never has them in stock.)

Also, has anyone used the AEA IsoPole antennas? Any opinions and comparisons with other 2m antennas?

-- Greg KE4DPX

Date: Thu, 23 Sep 1993 23:50:09 GMT
From: pa.dec.com!e2big.mko.dec.com!regent.enet.dec.com!gettys@decwrl.dec.com
Subject: Losses in VHF/UHF connectors (summary)
To: ham-ant@ucsd.edu

Actually, The so called UHF connector is properly named. You must remember that it was named when UHF was up to about 30 Megacycles (now known as 30 Mhz)! So 30 Mhz as the UPPER end of UHF is entirely reasonable.

As UHF is now defined, it is UNreasonable. Up to 2 meters, the UHF connector is marginally acceptable (although 6 meters is a better cutoff point). For anything above this, an N connector is the way to go (and even on 2 meters, if possible - but match the connector to the equipment's connector).

/s/ Bob N1BRM

Date: 24 Sep 93 11:56:34 GMT
From: ogicse!uwm.edu!spool.mu.edu!agate!garnet.berkeley.edu!ep208@network.ucsd.edu
Subject: Need help with HF receiver antenna for college dorm...
To: ham-ant@ucsd.edu

Tom, I have used fine enameled wire, like #22 or 26. You can hang it

out the window and it is nearly invisible. It works well for receiving.

It sounds like you may have metal in your dorm walls which make any internal antenna ineffective.

Another possibility is using a "socially acceptable" antenna like TV rabbit ears, and stick it out the window.

Before completely giving up on the indoor antenna, I would try tuning a loop to the frequency you are interested in. My experience has been that there are very few rooms where that does not bring in a lot of signal.

.

Date: 24 Sep 93 17:09:06 GMT
From: ogicse!emory!kd4nc!ke4zv!gary@network.ucsd.edu
Subject: Need help with HF receiver antenna for college dorm...
To: ham-ant@ucsd.edu

In article <16C5013B28.S944148@UMSLVMA.UMSL.EDU> S944148@UMSLVMA.UMSL.EDU (Tom) writes:

>
>I have a Realistic Dx-440 HF receiver and I would like to tune W1AW for
>CW practice. My problem is that I live in a college dorm room that's
>essentially a giant brick. I don't even receive WWV and I'm in central
>missouri. Anyway, someone suggested I try running a long loop of wire
>around the perimeter of my ceiling and using that as an antenna. I
>tried that and I got an antenna that wasn't even as good as the
>telescoping one!

Did you use a tuner? the feed impedance of the wire loop is going to vary wildly as you tune across HF. To achieve maximum signal transfer, you're going to need to match the loop impedance to the radio.

Gary

--
Gary Coffman KE4ZV |"If 10% is good enough | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | for Jesus, it's good | uunet!rsiatl!ke4zv!gary
534 Shannon Way | enough for Uncle Sam."| emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | -Ray Stevens |

Date: 24 Sep 93 18:44:28 GMT

From: ogicse!hp-cv!sdd.hp.com!col.hp.com!srngenprp!alanb@network.ucsd.edu

Subject: Need help with HF receiver antenna for college dorm...

To: ham-ant@ucsd.edu

Charles Woodson (ep208@garnet.berkeley.edu) wrote:

: Tom, I have used fine enameled wire, like #22 or 26. You can hang it
: out the window and it is nearly invisible. It works well for
: receiving.

I did exactly that when I was in college. One winter we had an ice storm which coated my antenna with an inch of ice. I was sure the weight would break the wire, but it didn't. Just make sure there is no way the wire could ever fall onto power lines.

A good cheap source of small-guage enameled wire is the deflection choke from an old TV set's cathode ray tube.

: It sounds like you may have metal in your dorm walls which make make
: any internal antenna ineffective.

Many dorms use steel-reinforced concrete or concrete block. That could well be your problem.

AL N1AL

Date: Tue, 21 Sep 93 22:24:39 CDT

From: envoy.wl.com!caen!kuhub.cc.ukans.edu!parsifal.umkc.edu!UMSLVMA.UMSL.EDU!
S944148@decwrl.dec.com

Subject: Need help with HF receiver antenna for college dorm...

To: ham-ant@ucsd.edu

I have a Realistic Dx-440 HF receiver and I would like to tune W1AW for CW practice. My problem is that I live in a college dorm room that's essentially a giant brick. I don't even receive WWV and I'm in central missouri. Anyway, someone suggested I try running a long loop of wire around the perimeter of my ceiling and using that as an antenna. I tried that and I got an antenna that wasn't even as good as the telescoping one!

I don't want to try outside antennas if I can avoid it. I'd have to make it very discreet but I'm I have no roommate so I can get wild with an indoor antenna.

Any help on the matter would be greatly appreciated!

Tom
(license in the mail) :)

End of Ham-Ant Digest V93 #58
